

CLIMATOLOGICAL DATA FOR JUNE, 1913.

DISTRICT NO. 8, TEXAS AND RIO GRANDE VALLEY.

B. BUNNEMEYER, District Editor.

GENERAL SUMMARY.

The month of June was cool and wet with less than the normal amount of sunshine. A marked feature of the weather was an unusually large number of cloudy days, the largest of record for June, resulting in comparatively low day temperatures. In the last 26 years there was but one June, that of 1890, in which the highest temperature of the month was lower than in June, 1913. The precipitation was in excess of the normal in nearly all sections of the district, but it was unevenly distributed. Over the eastern third of Texas the rainfall was generally deficient. The excess was greatest in southwestern Texas and in northeastern New Mexico. The number of rainy days was large when compared with the total rainfall for the month, and local showers occurred daily in some portion of the district. Severe hailstorms and heavy local rains did considerable damage in New Mexico to crops, roads, and bridges, and interrupted traffic. In south Texas the cloudy weather and frequency of precipitation resulted in greater activity of the boll weevil, but were favorable for late corn. The average number of days with 0.01 inch or more of precipitation was 10 in Colorado, 9 in New Mexico, and 7 in Texas. Snow was observed to fall on some of the higher mountain peaks in New Mexico, but none occurred at any of the reporting stations.

The greatest and least monthly amounts of precipitation were, respectively: In Colorado, 3.78 inches at Hermit and 1.23 inches at Manassa; in New Mexico, 9.90 inches at Harvey's Upper Ranch and 0.18 inch at Bluewater; and in Texas, 22.93 inches at Montell and 0.50 inch at Riverside. Amounts of 2.50 inches or more in 24 consecutive hours occurred at 2 stations in New Mexico and at 27 in Texas, the heaviest being 20.60 inches at Montell, Tex., on the 28th-29th.

TEMPERATURE.

The monthly mean temperature was normal in Colorado, 2° below normal in New Mexico, and 2.1° below in Texas. The greatest deficiency of temperature occurred along the Texas coast and in the middle and lower portions of the Rio Grande Valley. On account of the cloudy weather the average daily range of temperature was from 2° to 4° less than normal and varied from about 7° on the Texas coast to about 38° in portions of New Mexico. There were no well-defined warm or cool periods, but in general the warmest days occurred from the 1st to 4th, and from the 24th to 30th, and the coolest nights from the 7th to 14th. The highest and lowest temperatures reported were, respectively, in Colorado, 85° at Saguache on the 27th, and 21° at Hermit on the 13th; in New Mexico, 105° at Willard on the 30th, and 28° at Senorito on the 30th; and in Texas, 104° at Fort Stockton on the 4th, and 50° at Marathon on the 4th, at Seymour on the 7th, and at Carmona on the 13th. The local monthly means ranged from 46.6° to 60.7° in Colorado, from 53° to 76.8° in New Mexico, and from 68.5° to 84.2° in Texas.

PRECIPITATION.

The rainfall was heavy throughout the Rio Grande watershed, except locally at a few stations in New Mexico. The excess was most marked over the Texas portion from Del Rio to Fort McIntosh, where the monthly amounts

ranged from 5 to 13 inches. The average for the watershed was 2.62 inches, which is 1.57 inches more than the normal amount.

The Rio Pecos watershed also received an abundance of moisture. The excess was greatest in the extreme upper portion, where the monthly amounts ranged from 5 to nearly 10 inches. A slight deficiency occurred in the vicinity of Cloudcroft, N. Mex. The average for the drainage basin was 3.52 inches, or 1.71 inches more than normal.

The Texas watersheds from the Brazos eastward to the Sabine received less than the normal amount of precipitation, the deficiencies ranging from 0.21 inch for the Brazos to 1.57 inches for the Trinity. The Lavaca also showed a marked deficiency, but the remaining watersheds had excesses ranging from 0.72 inch for the Guadalupe watershed to 6.07 inches for that of the Nueces. The following are the monthly amounts in inches and hundredths for the various Texas watersheds: Nueces, 8.56; San Antonio, 3.64; Guadalupe, 3.72; Lavaca, 1.83; Colorado, 3.86; Brazos, 3.25; Trinity, 2.35; Neches, 2.96; Sabine, 2.23; and coastal plains, 4.84.

RIVER CONDITIONS.

The Rio Grande and Rio Pecos were well above low-water mark throughout the month, and the lower Rio Grande was nearly bank full between the 24th and 28th, but so far as reported no damage resulted from the high water. Good rises occurred in the middle and lower portions of the Colorado between the 18th and 24th; and torrential rains, of which special mention is made elsewhere in this summary, over the extreme upper Nueces watershed flooded that section during the last three days of the month. Old settlers there do not recall heavier rains or higher water. There were no rises of consequence in the other Texas streams.

TORRENTIAL RAINFALL AT MONTELL, TEX.

On the 28th a Gulf disturbance of moderate intensity moved inland near Corpus Christi, where a wind velocity of 50 miles per hour from the southeast was recorded. The storm apparently broke up over the upper Nueces watershed after giving copious rains in that section. The center of heaviest precipitation was at Montell, Uvalde County, where from 2.30 p. m. June 28 to 9 a. m. June 29 the fall amounted to 20.60 inches, being equivalent to an average rate of 1.11 inches per hour for $18\frac{1}{2}$ consecutive hours. Uvalde, in the same county, and less than 30 miles southeast of Montell, reported a rainfall of 8.50 inches from 1 p. m. June 28 to 6 a. m. June 29. These rains caused considerable damage in that section, flooding the lowlands, washing away houses and stock, and interrupting traffic and communication by telegraph and telephone for several days. One person was drowned in the vicinity of Montell.

The rainfall at Montell is the heaviest 24-hour precipitation of record in Texas, and the next heaviest is 18 inches, occurring at Fort Clark on June 14-15, 1899. It is remarkable that these torrential rains should have occurred in the same section of the State and in corresponding months. Fort Clark, although in Kinney County, is only about 30 miles southwest of Montell. The normal rainfall for June in that section is less than 3 inches, and for the year does not exceed 24 inches.

TABLE 1.—Climatological data for June, 1913. District No. 8, Texas and Rio Grande Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Greatest in 24 hours.	Departure from the normal.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Total number of cloudy days.	Number of clear days.			
<i>Colorado.</i>																				
Blanca.	Costilla.	7,865	4	57.1		80	26	31	11	38	2.86	—	1.18	0	12	9	15	w.	Lewis F. Botens.	
Cumbres.	Conejos.	10,015	6	56.6	+ 0.3	83	16†	31	13	43	1.28	+ 1.64	1.04	0.50	11	8	20	sw.	Mrs. Ida M. Lively.	
Garnett.	Costilla.	7,576	20	58.2	+ 0.3	71	20	21	13	42	2.33	+ 3.78	1.52	T.	12	16	8	sw.	Charles Speiser.	
Hermit.	Hinsdale.	9,843	6	46.6							2.06	—	0.92	0	11	2	18	w.	Marion Mason.	
La Veta Pass.	Costilla.	9,000	3								1.23	—	0.70	0	3	5	15	sw.	Clara M. Wright.	
Manassa.	Conejos.	7,700	7	53.6		81	15†	33	13	43	1.23	+ 1.51	0.87	0	6	4	1	sw.	J. B. Chapman.	
Platoro.	do.	7,675	6								3.08	—	0.69	0	14	16	9	w.	Walter R. Hook.	
Saguache.	Saguache.	7,740	21	60.7	+ 1.1	85	27	35	13	46	2.40	+ 2.40	1.22	1.05	6	4	25	sw.	Eugene Williams.	
San Luis.	Costilla.	7,794	22	56.4	+ 0.3	79	15	32	11	42	1.92	+ 1.22	1.05	0	10	19	1	sw.	P. B. Albright.	
Wagon Wheel Gap Experiment Station.	Mineral.	9,616	14	50.4	+ 0.3	73	30	29	13	39	2.98	+ 2.28	0.87	0.3	12	4	16	sw.	U. S. Weather Bureau.	
<i>New Mexico.</i>																				
Agricultural College.	Dona Ana.	3,863	52	74.9	- 4.0	96	30	48	8	40	2.63	+ 2.07	0.77	0	9	14	15	se.	N. Mex. Agricultural College.	
Alamogordo (near).	Otero.	4,323	16	76.4	- 1.0	100	30	52	5	41	1.66	+ 0.96	0.71	0	5	13	1	sw.	Edward Le Breton.	
Alamogordo.	do.	4,320	4			98	30				1.05		0.43	0	4	21	0	s.	Agent E. P. & S. W. R. R.	
Alamos Ranch.	Sandoval.	7,800	3								5.57		2.51	0	11	21	4	sw.	H. H. Brooks.	
Albuquerque.	Bernalillo.	5,000	37								0.99	+ 0.22	0.72	0	6	19	11	e.	Pitt Ross, C. E.	
Ancho.	Lincoln.	6,112	4								1.73		0.55	0	6	21	4	sw.	Agent E. P. & S. W. R. R.	
Anchor Mine.	Taos.	10,600	2								3.62		0.85	0	12	5	9	se.	Charles H. Brigham.	
Artesia.	Eddy.	3,350	5	74.0		102	25	50	2	44	1.84		0.95	0	6	20	7	se.	Will Benson, C. E.	
Aspen Grove Ranch.	Rio Arriba.	9,000	4								2.63		1.21	0	7	30	0	w.	Junius D. Maupin.	
Bateman's Ranch.	do.	8,900	2								3.17		1.43	0	6	16	13	sw.	John W. Bateman.	
Berino.	Doma Ana.	3,788	2								1.43		0	6	16	1	sw.	J. C. Richaberger.		
Bluewater.	Valencia.	6,732	11	61.5	- 4.0	88	15†	33	3	52	0.18	- 0.20	0.15	0	2	10	18	s.	Bluewater Development Co.	
Boaz.	Chaves.	4,154	4	71.4		97	25	49	18	41	4.03		0.93	0	13	12	17	se.	William Horner.	
Capitan.	Lincoln.	3,348	4								1.93		0.75	0	6	3	21	nw.	Agent E. P. & S. W. R. R.	
Carlizbad.	Eddy.	3,120	18	76.8	- 2.1	99	26	56	9	39	3.93	+ 1.66	1.06	0	11	17	10	se.	U. S. Reclamation Service.	
Carrizozo.	Lincoln.	5,429	5	70.7		93	14	50	5†	39	1.97		0.89	0	12	18	7	e.	Agent E. P. & S. W. R. R.	
Cerrillos (near).	Santa Fe.	5,700	1	67.8		92	25†	44	5†	46	3.25		0.92	0	10	6	22	se.	Irving C. Sweet.	
Chama.	Rio Arriba.	7,851	15	57.0	- 1.6	82	15	32	11	44	1.87	+ 1.14	0.50	0	6	18	12	sw.	Frank C. Johnson.	
Cloudcroft.	Otero.	8,650	11	56.0	- 0.9	72	24†	40	5	26	0.77	+ 0.25	0	5	14	0	16	nw.	Agent E. P. & S. W. R. R.	
Corona.	Lincoln.	6,666	4								1.79		0.60	0	7	15	11	se.	Do.	
Coyote.	do.	5,800	4								1.88		0.60	0	8	13	12	w.	Juan Vizil.	
Cundiy.	Santa Fe.	6,889	4								5.76		0.94	0	15	9	11	sw.	C. C. Clayton.	
Demonstration Farm.	San Miguel.	6,800	76								1.00		0	13	9	11	sw.	Agent E. P. & S. W. R. R.		
Durian.	Torrance.	6,272	4	66.6		88	3†	48	8	38	4.69		0.79	0	6	15	9	ne.	A. J. Evans.	
Elida.	Roosevelt.	4,345	1								0.79		0.28	0	6	15	9	sw.	Agent E. P. & S. W. R. R.	
Escondido.	Rio Arriba.	5,590	15	66.3	- 1.5	91	21	40	11	45	1.58	+ 0.88	0.50	0	5	17	7	sw.	Mrs. E. E. McBride.	
Espanola.	Torrance.	6,140	8	63.2		88	14†	34	6	50	1.07	+ 0.46	0.28	0	7	12	16	sw.	Geo. H. Van Stone.	
Estancia.	Lincoln.	6,231	36	63.9	- 3.1	89*	26	38	6	42*	2.81	+ 1.04	1.11	0	15	10	16	se.	U. S. Sanitarium.	
Fort Stanton.	Guadalupe.	3,960	5	70.0		93	26	46	6	44	4.87		1.84	0	17	14	9	sw.	Peter Yockey.	
Fort Sumner.	Lincoln.	6,635	4			93	24†	47	11		1.64		0.35	0	10	3	19	s.	Agent E. P. & S. W. R. R.	
Gallinas.	Lincoln.	7,500	6	58.0		84	30	38	7†	42	7.65		2.78	0	17	11	13	sw.	U. S. Forest Service.	
Gallinas Planting Sta.	San Miguel.	9,400	4	54.6		75	15†	36	6†	37	9.90		2.10	0	18	6	18	se.	Chas M. Crossman.	
Harvey's Upper Ranch.	do.	73.4	1			98	15†	55	1†	44	3.28		0.95	0	11	8	12	sw.	R. B. Schoonmaker.	
Hobbs.	Chaves.	3,904	4	72.0		97	25	54	9	41	3.92		1.75	0	10	12	15	se.	E. H. Byers.	
Hondo Reservoir.	Sandoval.	6,100	3	64.1		86	26†	40	11	36	3.77		0.85	0	9	12	6	sw.	U. S. Reclamation Service.	
Jemez Springs.	Eddy.	4,300	3	72.4		96	25†	56	10†	37	2.05		0.55	0	12	11	11	w.	Mrs. L. L. Shields.	
Knowles (near).	Valencia.	5,840	8	70.6		97	23†	40	4	47	1.35	+ 0.82	1.35	0	1			sw.	J. W. Mosley.	
Laguna.	Guadalupe.	4,500	8								0.97		0.52	0	6	14	16	sw.	Gus Weiss.	
Lagunita.	Sierra.	5,412	8								1.39		0.62	0	6	23	7	sw.	P. A. Turnbull.	
Lake Valley.	Eddy.	3,170	1	72.6		98	25†	53	1†	44	4.65		0.71	- 0.08	0.34	0	6	28	e.	William P. Keil.
Lakewood (near).	Doma Ana.	4,156	14								2.73		0.94	0	13	5	13	sw.	Mrs. J. K. Boyd.	
Lanark.	do.	6,385	26	62.2	- 3.3	87	13	41	14	41	4.65		0.69	0	5	12	18	sw.	Agent So. Pac. R. R.	
Las Vegas.	San Miguel.	4,900	24	71.3	- 1.3	95	16	47	9	46	2.57	+ 1.88	2.00	0	5	12	18	sw.	New Mexico Normal Univ.	
Los Lunas (near).	Valencia.	5,657	3	65.8		90	30	42	9	38	1.92	+ 0.66	0.50	0	8	9	21	sw.	Richard Pohl.	
Mescalero.	Socorro.	6,627	2	60.2		82	26	39	5†	39	5.12		1.98	0	18	12	10	sw.	Wm. Pender.	
Mineral Hill.	San Miguel.	7,050	8								5.57		2.33	0	9	1	23	sw.	Rev. R. H. Harper.	
Monterey.	Otero.	4,436	4								T.		T.	0	0	20	4	sw.	W. M. Nelson.	
Mountainair.	Torrance.	6,547	11	65.1	- 1.3	92	1†	38	5	52	0.79	- 0.33	0.41	0	6	11	14	sw.	Miss Julia Hill.	
Mountaintop.	Otero.	do.	3,989	4							2.40		0.42	0	12	10	14	sw.	Charles E. Beasley.	
Newman.	Lincoln.	8,000	4								2.94		0.86	0	6	19	0	w.	Agent E. P. & S. W. R. R.	
Nogal (near).	do.	3,989	4								4.44		1.13	0	16	9	15	s.	H. E. Keller.	
Noiria.	Doma Ana.	4,114	4								2.78		0.50	0	7	23	2	w.	Agent E. P. & S. W. R. R.	
Orogrande.	Otero.	4,171	4								1.81		0.50	0	7	11	18	e.	Do.	
Oscura.	Linecol.	5,016	4								0.83		0.35	0	9	1	15	sw.	Eugene F. Jones.	
Otis.	Eddy.	3,100	4								4.16		1.09	0	9	16	9	se.	A. M. Hove.	
Pastura.	Guadalupe.	5,285	4								3.89		1.64	0	8	4	11	s.	Agent E. P. & S. W. R. R.	
Placitas (near).	Bernalillo.	8,000	2								—		—	0	14	6	13	sw.	Geo. C. Ellis.	
Plainview (near).	Chaves.	4,300	2								—		—	0	12	9	7	sw.	L. P. Adair.	
Red River Canyon.	Taos.	8,956	6	57.6		82	30	30	11	44	4.40		1.00	0	9	10	19	se.	Mrs. L. R. Penn.	
Richland.	Chaves.	71,01	49	45	42	6	50	52	1†	48	1.50	+ 0.83	0.75	0	4	12	12	sw.	K. H. Embree.	
Rio Grande Dam.	Sierra.	4,265	23	76.5	+ 1.4	99	30	55	9	39	0.86	- 0.12	0							

TABLE 1.—Climatological data for June, 1913. District No. 8—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.							Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of cloudy days.	Sky.	Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of partly cloudy days.	Number of cloudy days.							
New Mexico—Contd.																							
Tularosa.	Otero.	4,436	3								3.00		2.00	0	5	19	5	6	sw.	I. L. Fairless.			
Vaughn.	Guadalupe.	5,952	4								94	18†	46	8	1.47	9	15	13	2	sw.	Agent E. P. & S. W. R. R.		
Virsylvania.	Taos.	7,500	3	67.1		85	20	42	11	30	1.47		1.08	0	5	9	15	6	se.	Dr. I. N. Woodman.			
Willard.	Torrance.	6,086	1	70.0		105	30	36	6	65	0.51		0.20	0	5	9	15	6	se.	Dr. V. S. Cheyney.			
Winsors.	San Miguel.	8,200	17	53.0	-1.8	78	2†	33	30	44	5.35	+ 3.03	1.85	0	20	9	16	5	sw.	James F. Matty.			
Texas.																							
Abilene.	Taylor.	1,738	28	77.2	-1.0	96	2	60	9	27	1.99	-1.18	0.84	0	7	6	8	16	s.	U. S. Weather Bureau.			
Albany.	Shackelford.	1,429	19	76.0	-3.0	100	1†	54	13	39	3.78	+ 0.20	1.46	0	6	13	5	12	se.	N. L. Bartholomew.			
Alice.	Jim Wells.	209	2	80.0		99	1	67	12†	28	8.65		4.00	0	13	14	4	12	se.	R. M. Boerum.			
Alpine.	Brewster.	4,482	3								3.12		0.90	0	8	14	0	16	s.	H. B. Cowles.			
Alvin.	Brazoria.	49	15	78.2		100	1	62	14	34	1.91	-2.57	0.95	0	5	8	9	13	s.	Alvin Japanese Nursery.			
Anahuac.	Chambers.	23	4								1.69		0.57	0	6	8	6	8	se.	Lone Star Canal Co.			
Antelope.	Jack.	2									3.55		0.84	0	8	16	8	6	sw.	Brown Rudolph.			
Aspermont.	Stonewall.	2									5.41		1.60	0	11	11	9	10	se.	Bryant Link Co.			
Austin.	Travis.	593	57	77.0	-4.0	93	1†	58	10	33	1.83	-0.68	0.80	0	11	11	9	10	se.	A. Deussen.			
Ballinger.	Runnels.	1,637	17	77.4	-2.6	99	1†	59	13	33	2.03	-0.90	0.63	0	7	8	11	11	s.	E. M. Eubank.			
Barstow.	Ward.	2,573	6	77.2		99	25	59	5	36	1.46		0.85	0	3	27	1	se.	F. P. Ingerson.				
Bay City.	Matagora.	53	3	77.8		89	1†	63	14	22	1.34		0.51	0	7	10	8	12	s.	E. C. Quereau.			
Beaumont.	Jefferson.	29	13	80.6	+ 0.5	95	18	65	11†	24	3.64	-1.27	1.34	0	6	13	0	17	se.	John Bender.			
Beeville.	Bee.	225	17	78.5	-3.9	100	1	60	12	34	3.28	+ 2.22	1.60	0	11	8	4	18	se.	Geo. E. Faupel.			
Big Spring.	Howard.	2,396	15	77.8	-3.4	101	6	58	8†	39	3.28	+ 1.42	1.18	0	11	12	15	3	s.	Geo. Reagan.			
Blanco.	Blanco.	1,350	17	79.8	+ 0.9	97	3	57	13	33	3.17	+ 5.29	1.72	0	9	14	9	7	e.	R. C. Crist.			
Boerne.	Kendall.	1,412	21	74.6	-4.5	95	1	54	2†	40	6.05	+ 3.72	1.36	0	12	10	13	7	sw.	F. W. Schweppé.			
Booth.	Fort Bend.	81	12								3.02	-0.50	1.83	0	6	21	0	9	se.	T. R. Booth.			
Bowie.	Montague.	1,113	18	79.0	-0.6	103	2	57	12	33	2.68	-1.01	0.82	0	10	10	3	17	s.	Craig Anderson.			
Brady.	McCulloch.	1,500	12								3.35	-1.33	1.37	0	9	19	5	6	s.	Prof. J. O. Wallace.			
Brazoria.	Brazoria.	25	24	77.9	-1.8	93	1†	64	1†	29	3.16		1.02	0	11	9	15	6	s.	Mrs. M. A. Stevens.			
Brazos.	Palo Pinto.	801	4								3.36		0.83	0	8	1	25	4	s.	Robt. E. Boyett.			
Brenham.	Washington.	350	28	79.6	-1.6	95	20	63	12	25	2.76	-1.61	1.18	0	6	11	7	12	s.	Mrs. B. F. Sloan.			
Bridgeport.	Wise.	754	4								2.64		0.65	0	8	5	11	14	s.	Claude Strange.			
Brownsville.	Nueces.	12	20	80.8	-0.7	92	9†	68	23	24	5.10	+ 3.20	3.48	0	8	18	5	7	se.	G. H. Ritter.			
Brownwood.	Cameron.	38	49	78.2	-4.3	91	1	65	10	22	4.96	+ 2.68	1.25	0	16				se.	U. S. Weather Bureau.			
Buena Vista.	Brown.	1,342	21	77.4	-3.5	101	1	53	14	38	4.01	+ 1.11	1.65	0	7	10	10	10	s.	Mrs. Pearl Smith.			
Cameron.	Milan.	5									0.91		0.45	0	3	25	2	3			J. W. Denis.		
Carmona.	Polk.	330	5	77.2		95	1	50	13	35	2.46		0.82	0	8	11	13	6	s.	J. E. Watts.			
Carrizo Springs.	Dimmit.	1																		M. E. Spitzer.			
Claytonville.	Fisher.	2,100	18	76.7	-1.9	99	3	57	9	34	2.34	-1.17	1.01	0	9	11	1	18	se.	M. E. Cook.			
Clifton.	Bosque.	671	2								3.36		0.83	0	8	1	25	4	s.	Wm. Lanius.			
Coleman.	Coleman.	1,710	19	78.0	-0.1	101	3	58	13	32	4.85	+ 1.65	3.03	0	5	4	13	13	s.	R. M. Jones.			
Collegeport.	Matagorda.	1	17	74.4		94	27	58	11†	28										J. E. Stevens.			
College Station.	Brazos.	308	23	80.7	0.0	99	20	59	12	33	1.53	-1.80	0.58	0	12	4	4	22	s.	H. A. Clapp.			
Colorado.	Mitchell.	2,066	19	76.6	-4.1	98	1†	52	7	36	2.14	+ 0.49	1.71	0	6					Prof. G. S. Fraps.			
Columbus.	Colorado.	206	9								2.06		0.88	0	4	16	4	10	s.	R. M. Abbot.			
Comanche.	Comanche.	1,358	7	78.4		102	1	60	13	30	4.48		1.85	0	10	0	22	7*	se.	Mrs. Sophie Bridge.			
Corpus Christi.	Nueces.	20	26	78.2	-2.4	87	1	71	12	34	3.95	+ 1.21	1.84	0	15	6	18	8	s.	U. S. Weather Bureau.			
Corsicana.	Navarro.	445	24	79.2	-1.4	96	2	59	12	27	1.40	-2.09	0.70	0	4	14	6	10	s.	D. H. Winn.			
Cotulla.	La Salle.	425	6								4.70		1.80	0	8					Holland Agricultural Co.			
Crockett.	Houston.	350	9	80.0		97	1†	58	12	33	1.89		0.51	0	6	17	7	6	s.	A. M. Rencher.			
Cuero.	De Witt.	177	23	80.6	-2.6	98	1	62	19	29	2.45	-1.59	0.62	0	12	10	5	15	s.	H. R. Frobes.			
Dallas.	Dallas.	466	24	80.6	0.0	102	2	56	13	35	2.24	-1.91	0.61	0	6	12	0	18	s.	G. A. Eisenlohr.			
Danevang.	Wharton.	145	17	81.3	-0.8	100	1	63	2	36	0.83	-3.50	0.40	0	3	19	5	6	se.	H. P. Hermansen.			
Del Rio.	Valverde.	952	7	79.4	-2.7	98	2	65	8	24	5.44	+ 2.33	2.75	0	10	3	20	7	s.	U. S. Weather Bureau.			
Denton.	Denton.	621	29	79.6		102	1†	54	12	35	1.76		0.55	0	11	11	12	7	se.	T. W. Buell.			
Devine.	Medina.	653	3	81.2		99	2	65	9†	31	7.05		1.70	0	11	14	9	7	se.	M. A. Keller.			
Dialville.	Cherokee.	575	10	77.8	-1.1	94	2†	56	12	29	3.36	-0.20	1.05	0	6	16	9	5	s.	J. M. B. McKnight.			
Dilley.	Frio.	569	3								4.90		1.60	0	7					John W. Miller.			
Dublin.	Erath.	1,466	17	78.8	-0.8	103	1†	59	12	36	4.05	+ 1.27	1.21	0	11	9	12	9	s.	Jno. O. Shafer.			
Duval.	Travis.	420	24	78.9	-3.0	95	2	62	12†	28	0.94	-2.22	0.55	0	7	13	3	14	se.	J. C. Edgar.			
Eagle Pass.	Maverick.	800	36	81.8	-3.3	102	2	65	9†	30	13.06	+ 10.62	7.21	0	12	2	23	5	se.	Charles Tarver.			
Eastland.	Eastland.	1,420	6	75.4		99	3	53	13	37	5.66		1.10	0	9	8	17	5	s.	James A. Beard.			
Edna.	Jackson.	71	4								2.79		1.45	0	4					E. L. Faires.			
El Paso.	El Paso.	3,762	34	76.8	-2.8	96	26	55	8	32	0.91	+ 0.36	0.37	0	9	19	10	1	se.	U. S. Weather Bureau.			
Encinal.	La Salle.	558	10																	Walter Pettit.			
Falfurrias.	Brooks.	5	50.7	101	1	66	1	35	4.81		1.11		0	9	11	16	3	se.	W. A. Gardner.				
Flatonia.	Fayette.	465	5	80.1		99	1	62	15	32	2.01		0.83	0	6	13	5	12	s.	Fred W. Laux.			
Smith.	Smith.	483	3	78.4		98	2	53	14	36	1.45		0.38	0	8	15	6	9	se.	F. C. Carter.			
Fort Clark.	Kinney.	1,050	42	77.0	-5.3	94	1	53	19	30	3.60	+ 0.78	1.00	0	5	16	5	9	se.	Post Hospital.			
Fort Davis.	Jeff Davis.	5,000	34	84.2	-1.2	102	1	67	11	31	7.76	+ 5.66	4.75	0	10	6	14	10	e.	C. H. Bird.			
Fredericksburg.	Gillespie.	1,742	24	75.8	-3.0	97	1	60	15	30	4.51	+ 2.21	2.37	0	12	6	15	9	s.	Post Hospital.			
Gail.	Borden.	1	76.5		97	27	56	8†	34	6.65		5.00	0	5	12	0	18	s.	Arthur Striegler.				
Gainesville.	Cooke.	738	23	79.2	+ 0.8	102	2	56	12	36	2.47	-1.16	0.78	0	7					J. D. Brown.			
Galveston.	Galveston.	69	42	78.5	-2.4	91	19	68	12	35	2.51	-2.24	0.94	0	5	15	5	10	s.	J. L. Hickson.			
Garden City.	Glasscock.	1									4.71		2.30	0	8	15	5	10	s.	U. S. Weather Bureau.			
Gatesville.	Correll.	795	9	79.0		98	2	59	15	31	2.15		0.65	0	8	17	5	8	s.	W. C. Cunningham.			
Georgetown.	Williamson.	750	18	79.2	-2.1	97	1	55	15	39	1.07	-1											

TABLE 1.—Climatological data for June, 1913. District No. 8—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.				Precipitation, in inches.				Sky.	Prevailing wind direction.	Observers.					
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Texas—Continued.																			
Henderson.	Rusk.	500	4								3.21		1.92	0	6	17	5	8	
Hewitt.	McLennan.	664	18								2.00	- 2.24	1.06	0	6	19	2	9	
Hico.	Hamilton.		2								1.86	0.32	0	5					
Hillsboro.	Hill.	628	10	76.6		100	1†	51	9	40	1.42	- 1.31	0.52	0	5	9	13	8	
Hondo.	Medina.	901	14	78.8	- 4.3	96	2	65	3†	29	3.52	+ 1.54	0.65	0	9	8	14	8	
Houston.	Harris.	138	23	78.9	- 2.2	94	1	64	12	24	2.63	- 2.35	1.97	0	9	8	14	8	
Huntsville.	Walker.	400	29	78.7	- 2.2	95	20	59	12	28	2.00	- 2.15	1.48	0	4	17	0	13	
Jayton.	Kent.		3								3.95		1.40	0	5	18	0	12	
Jewett.	Leon.	496	9	81.9		101	12	62	18	37	2.30		2.20	0	2	20	2	8	
Junction.	Kimble.	1,645	12	74.4		96	1	54	7	40	5.15	+ 2.05	2.25	0	5				
Kaufman.	Kaufman.	448	14	81.6	+ 0.2	101	2	58	12	30	1.11	- 2.60	0.50	0	4	16	11	3	
Kerrville.	Kerr.	1,650	17	76.5	- 1.7	98	22	60	3†	32	5.34	+ 1.30	2.02	0	10	6	16	8	
Knickerbocker.	Tom Green.	2,050	9	77.0		98	2†	60	12†	35	3.72		1.70	0	9	10	15	5	
Kopperl.	Bosque.	576	16								3.59	+ 0.94	1.50	0	6	7	7	16	
Lagrange.	Fayette.	276	3								1.86		0.74	0	8	11	7	12	
Lamesa.	Dawson.	2,500	3								10.30		5.72	0	9				
Lampasas.	Lampasas.	1,026	21	78.2	- 1.5	98	1†	56	15	35	2.76	- 0.79	0.88	0	7	14	2	14	
La Parra.	Willacy.	38	10								6.27	+ 4.58	2.40	0	12	8	17	5	
Laredo.	Webb.	421									5.18		1.30	0					
Laureles Ranch.	Nueces.	20	13																
Liberty.	Liberty.	38	9	78.2		95	1	60	13†	30	2.39		0.81	0	5	14	10	6	
Llano.	Llano.	1,040	22	78.9	- 2.7	98	2	63	15	26	5.05	- 3.04	1.14	0	9	8	16	6	
Llano Grande.	Hidalgo.	86	5	78.5		97	6	62	9†	34	4.52		1.45	0	11	8	21	1	
Long Lake.	Anderson.	229	8								2.79		1.38	0	4	7	9	14	
Longview.	Gregg.	336	27	80.5	- 0.6	101	20	58	13†	35	2.89	+ 0.34	1.10	0	7	21	7	22	
Lubbock.	Lubbock.	325	6	78.5		97	25†	55	13	34	5.88		2.78	0	15	10	8	12	
Lufkin.	Angelina.	418	24	80.4	- 1.6	97	1†	64	12†	28	2.67	- 0.10	0.82	0	7	17	5	8	
Luling.	Caldwell.	713	3								1.80		0.80	0	11	11	8	11	
McGregor.	McLennan.	612	11	78.8		101	2	53	12	35	3.00	- 0.28	1.18	0	6	10	13	7	
McKinney.	Brewster.	4,043	3	63.5		88	6	50	4	31	4.00		2.50	0	5	9	9	12	
Marathon.	Burnet.	771	5								7.20		2.50	0	9	9	0	21	
Marble Falls.	Presidio.		5								3.90		1.80	0	7				
Marfa.	Harrison.	375	11	78.2		97	20	51	14	38	2.03	- 0.58	0.62	0	7	3	24	3	
Marshall.	Matagorda.	12	3								2.78		1.24	0	8	16	4	10	
Matagorda.	Limestone.	537	9	80.2		98	2	57	12	32	1.51		0.81	0	4	21	7	1	
Mexia.	Midland.	10	74.8	1		96	1†	55	8	38	3.81	+ 2.41	3.00	0	4	13	1	51	
Mission.	Hidalgo.	140	3								2.01		0.97	0	7	12	12	6	
Mont Belvieu.	Chambers.	65	3								22.93		20.60	0	12	1	11	13	
Montell.	Uvalde.		1																
Mount Blanco.	Crosby.	2,750	24	73.6	- 2.1	98	2	53	9†	35	8.79	+ 5.60	5.78	0	5	10	9	11	
Nacogdoches.	Nacogdoches.	271	14	76.6	- 2.2	95	20	54	13†	33	1.61	- 3.43	0.72	0	4	20	4	6	
New Braunfels.	Comal.	720	24	78.4	- 2.3	93	2	64	13†	26	5.64	+ 2.95	1.32	0	3	0	25	5	
Palestine.	Anderson.	510	31	77.4	- 1.0	93	2	56	12	27	1.51		2.49	0.80	0	7	17	11	
Panter.	Hood.	1,000	24								3.45	+ 0.72	1.62	0	7				
Pearsall.	Frio.	629	3								7.81		2.71	0	10				
Pierce.	Wharton.	102	7	79.7		96	1†	64	3†	30	1.10		0.40	0	6	9	0	21	
Plainview.	Hale.	3,370	17	71.7	- 2.9	96	1†	53	9†	37	4.39	+ 0.62	1.28	0	12	7	14	9	
Port Lavaca.	Calhoun.	20	12	80.0	- 1.6	96	1	67	7	27	5.51		1.76	0	5	15	3	12	
Post.	Garza.	2,700	3								3.22		3.90	0	14	5	13	12	
Putnam.	Callahan.	1,591	2								3.73		1.90	0	14	5	13	12	
Raymondville.	Cameron.	2	79.4								3.22		2.55	0	5	15	4	15	
Ricardo.	Nueces.	57	4	79.1		99	8	64	3	30	9.47		3.15	0	10	12	2	16	
Rio Grande.	Starr.	36									2.90	+ 1.52	1.60	0	5	11	3	16	
Riverside.	Walker.	169	9								0.50		0.30	0	2	21	2	7	
Rockland.	Tyler.	138	9								3.20		1.80	0	4	11	9	10	
Rockport.	Aranas.	12	12	78.7	- 2.6	86	1†	72	8†	10	6.65	+ 4.17	3.50	0	8	20	5	5	
Rossville.	Atascosa.	558	6	77.4		93	3	59	5†	32	8.25		2.56	0	14	6	15	9	
Runge.	Karnes.	308	18								2.83	- 0.30	1.27	0	5				
Sabinal.	Uvalde.	964	9	79.4		98	2	65	3†	31	5.07		1.22	0	15	2	26	2	
Salado.	Bell.	3									2.56		0.78	0	6	12	5	13	
San Angelo.	Tom Green.	1,847	22	77.0	- 4.0	98	1†	60	13	32	4.60	+ 1.97	2.70	0	2	9	13	8	
San Antonio.	Bexar.	701	28	79.2	- 1.2	95	1	64	13	26	2.90	- 0.21	0.78	0	12	13	10	7	
San Augustine.	San Augustine.	360	4	77.2		97	2	53	13	35	3.03		0.88	0	8	12	9	9	
San Juanito.	Hidalgo.		4	82.6		100	1	61	10	31	5.90		1.35	0	15	0	30	se.	
San Marcos.	Hays.	588	20	78.5	- 2.7	93	2†	60	18	31	2.13	- 1.05	0.73	0	4	2	28	se.	
San Saba.	San Saba.	1,712	12	77.4	- 3.3	99	2	58	15	33	5.63		0.27	1.20	0	9	16	13	1
Santa Anna.	Coleman.	1,744									3.35		0.94	0	5	3	8	19	
Santa Gertrudes.	Nueces.	13									8.14	+ 5.38	2.00	0	11				
Sealy.	Austin.	201	2								2.32		1.38	0	5	10	9	11	
Seymour.	Baylor.	1,320	7	77.6		97	29	50	7	30	3.93		1.04	0	7	7	10	se.	
Snyder.	Scurry.	251	4	74.7		95	1†	55	9	31	2.44		0.75	0	3	19	3	8	
Somerville.	Burleson.	2,300	9	75.6		99	1	54	9	33	4.35		2.30	0	4	16	6	6	
Sonora.	Sutton.	2,200	9								2.60		0	9	10	8	12	se.	
Spur.	Dickens.	2,300	2								0.66		0	4	8	16	6	6	
Stamford.	Jones.	424	2	76.4		97	1	60	8	29	1.02		0.50	0	4	21	6	3	
Sugarland.	Fort Bend.	79	12	79.0	- 2.0	95	1	64	3†	28	2.55	- 1.74	1.40	0	4				
Sutherland Springs.	Wilson.	424	3								2.30		0.75	0	4				
Tahoka.	Lynn.		73.2								10.93		5.12	0	11	0	22	8	
Taylor.	Williamson.	583	12	78.8	- 1.2	96	20	60	15	29	1.49	- 2.03	0.83	0	8	7	16	7	
Temple.	Bell.	630	23	79.6	- 0.3														

TABLE 2.—*Daily precipitation for June, 1913. District No. 8, Texas and Rio Grande Valley.*

TABLE 2.—*Daily precipitation for June, 1913. District No. 8—Continued.*

TABLE 2.—*Daily precipitation for June, 1913. District No. 8—Continued.*

* Precipitation included in that of the next measurement.

Separate dates of falls not recorded.

Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.
a 22-05

a 22.05.

TABLE 3.—Maximum and minimum temperatures at selected stations for June, 1913. District No. 8, Texas and Rio Grande Valley.

Date.	Colorado.				New Mexico.										Texas.													
	Garnett.		San Luis.		Agricultural College.		Carlsbad.		Fort Stanton.		Mountain-air.		Rosedale.		Roswell.		Santa Fe.		Santa Rosa.		Abilene.		Big Spring.		Brownsville.		Corpus Christi.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1.....	73	38	76	40	93	57	97	58	.....	43	92	40	82	46	90	58	70	51	89	52	96	69	100	68	91	73	87	73
2.....	79	38	74	38	92	56	96	60	.....	46	92	44	80	47	92	56	79	54	90	55	96	70	100	68	90	68	86	71
3.....	76	42	73	38	93	59	93	63	.....	48	86	48	78	48	92	58	79	54	90	63	95	72	96	70	88	70	82	71
4.....	81	42	73	41	89	68	96	58	.....	53	84	44	78	45	82	58	73	51	80	56	89	70	79	64	88	72	82	74
5.....	79	42	74	44	89	49	95	59	.....	42	85	38	80	50	90	57	76	50	90	54	82	71	91	63	88	73	83	73
6.....	75	37	69	35	89	55	95	67	.....	38	88	44	75	48	92	55	73	50	91	49	94	69	101	62	88	68	81	73
7.....	76	40	69	36	85	65	96	62	74	42	70	45	70	50	81	57	68	48	75	56	87	65	85	62	90	68	81	72
8.....	69	39	67	36	82	48	95	60	62	45	65	44	70	43	75	56	58	46	68	54	77	65	79	58	90	69	81	72
9.....	66	40	70	42	85	55	97	56	73	46	70	45	70	40	77	58	65	44	70	54	66	60	88	58	89	69	81	73
10.....	63	41	62	41	87	60	78	59	66	53	67	50	72	50	87	59	59	49	64	53	72	61	88	60	79	65	82	71
11.....	63	35	62	32	86	55	78	62	70	53	78	45	75	40	70	60	69	40	74	55	76	62	89	62	82	68	79	72
12.....	62	40	59	41	88	59	90	60	79	56	81	43	78	45	78	60	71	51	75	54	80	65	82	64	89	69	81	71
13.....	73	31	66	33	93	53	91	60	86	44	86	41	80	47	87	59	75	49	88	59	86	62	86	63	83	68	81	71
14.....	78	37	74	37	94	63	92	61	85	44	90	39	82	48	89	60	79	51	91	55	86	67	91	66	83	71	81	76
15.....	82	42	79	41	92	63	91	62	.....	90	54	84	50	89	59	81	57	89	59	88	68	93	62	86	72	83	73	
16.....	83	40	74	43	88	60	93	60	81	50	86	48	82	50	87	59	78	56	85	57	86	67	93	67	83	70	82	73
17.....	79	40	75	41	86	62	92	61	78	49	82	44	78	50	78	63	74	54	85	57	86	69	87	68	80	72	78	73
18.....	82	40	73	43	88	62	90	62	75	56	84	45	73	52	77	62	72	55	81	61	77	68	83	65	83	73	80	77
19.....	80	45	74	45	89	61	82	65	79	50	87	49	75	50	81	63	77	51	85	58	83	68	83	73	80	75	80	74
20.....	79	45	75	40	89	60	86	64	82	50	84	44	78	48	86	59	79	52	84	55	88	68	92	64	85	74	83	74
Mns..	76.3	40.2	72.1	40.7	89.6	60.2	91.4	62.2	78.6*	49.2*	83.9	46.3	78.4	48.8	85.0	59.7	74.2	51.4	84.0	56.6	86.2	68.1	90.0*	65.6*	85.4*	71.0*	82.3	74.1

Date.	Texas.																												
	Del Rio.		El Paso.		Fort McIn-tosh.		Fort Stockton.		Fort Worth.		Galveston.		Hallett-ville.		Houston.		Lufkin.		Palestine.		Plain-view.		San Antonio.		Seymour.		Taylor.		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			
1.....	94	73	93	65	102	76	96	62	100	73	84	75	96	72	94	70	96	66	92	70	96	60	95	72	.....	94	70	
2.....	98	74	92	66	100	73	95	61	98	73	83	74	97	71	91	70	94	65	93	71	96	59	94	70	.....	95	69	
3.....	94	73	93	67	100	77	97	64	100	73	81	75	95	65	90	68	92	65	90	67	89	63	94	69	.....	93	68	
4.....	85	72	90	65	101	70	104	65	92	73	82	75	96	68	90	70	92	67	90	68	76	58	91	71	.....	90	67	
5.....	91	72	89	57	98	70	102	64	89	71	82	75	96	68	91	68	84	67	87	68	87	60	89	71	.....	90	66	
6.....	93	71	90	64	95	75	100	70	92	73	83	76	94	70	89	70	92	64	90	68	94	66	92	70	.....	92	71	
7.....	76	66	82	59	100	71	96	59	92	69	84	77	94	69	90	71	92	62	89	70	86	60	91	72	.....	80	68	
8.....	88	65	82	55	95	73	91	57	81	68	85	76	95	70	92	71	93	67	91	69	84	57	90	73	.....	89	70	
9.....	90	67	84	57	97	68	87	60	74	64	80	70	92	73	90	69	80	69	74	65	84	53	89	68	.....	81	69	
10.....	90	70	85	63	94	73	85	61	72	70	77	69	76	70	76	70	70	63	70	61	64	53	87	69	.....	77	67	
11.....	80	68	88	62	87	67	84	65	77	63	75	69	86	68	76	67	81	63	77	62	69	54	82	68	.....	80	64	
12.....	84	68	90	63	90	75	82	65	79	59	75	68	84	66	77	64	80	57	78	56	74	58	84	66	.....	81	62	
13.....	87	70	93	62	100	74	95	62	86	61	78	71	88	68	81	65	87	55	83	60	85	57	88	64	.....	86	62	
14.....	91	72	91	64	96	78	95	65	88	66	80	72	91	69	86	66	91	57	86	65	89	59	88	68	.....	88	65	
15.....	92	71	93	65	96	72	93	64	89	64	81	75	92	65	84	67	92	60	88	61	89	59	92	66	.....	89	60	
16.....	93	74	88	65	96	70	93	66	89	72	80	76	88	73	85	73	90	68	88	68	89	54	82	70	.....	90	60	
17.....	81	70	86	68	98	68	89	65	86	70	78	72	87	74	82	72	85	70	88	61	83	71	78	68	88	70	87	62
18.....	81	69	89	67	90	76	80	64	84	71	80	75	87	73	83	73	89	70	81	69	78	63	85	65	83	70	88	60
19.....	80	69	89	62	88	70	80	62	91	71	91	68	84	72	90	75	93	66	86	75	82	64	84	71	88	68	86	71	
20.....	87	66	86	63	90	77	88	62	92	73	86	76	95	73	92	74	96	71	91	73	85	61	90	68	82	71	87	61
21.....	89	69	84	65	89	71	88	61	95																				